Undergraduate Degree Requirements

Overall Requirements for Baccalaureate Degrees
A candidate for a baccalaureate degree must present a minimum of 120 semester hours (except where otherwise noted in degree program descriptions). A minimum overall cumulative grade point average of C (grade point average of 2.00) must be made in all courses taken, and an overall cumulative grade point average of at least 2.00 must be attained in the major except in those programs requiring a grade point average above 2.00. Grades in all courses taken, including failing grades (except courses in which grade forgiveness was applied), are counted when calculating a student’s cumulative grade point average. Grades in all courses taken in the major, including failing grades, are counted when calculating a student’s grade point average in the major. Students completing a minor must have a minimum overall cumulative grade point average of 2.00 in all courses taken toward the minor.

Residency Requirements for Baccalaureate Degrees
A student who seeks a bachelor’s degree from Old Dominion University must, in addition to meeting other requirements of the University, earn a minimum of 25 percent of the total number of credits required for the degree (for example, 30 credits in a 120-credit degree program) through on- or off-campus instruction. This must include a minimum of 12 credit hours of upper-level courses in the declared major program. Some program residency requirements exceed the University minimum. Courses taken at Old Dominion University (as the host institution) through the Virginia Tidewater Consortium do not count toward resident credit. The responsibility for meeting the requirements for a degree rests with the student.

College Requirements
Students should consult with the department of their major for further information regarding the following.

1. Major programs may require specific Skills or Ways of Knowing courses.
2. When requirement hours vary, major programs specify the number.
3. In addition to the University General Education Requirements, college requirements must be met. For example, the College of Arts and Letters and the Strome College of Business require foreign language proficiency at the fourth-semester level (202) for the Bachelor of Arts degree.

Requirements for Major
Each undergraduate student shall select a major department or option at the appropriate time in his or her curriculum. In consultation with the head of his or her major department or a designee, such as the chief departmental advisor, the student shall select the courses for the major. At least 12 hours of upper-level course work in the declared major program must be taken at Old Dominion University in resident or extension study. All students must complete a writing intensive (W) course in the major at the upper-division level at Old Dominion University and earn a grade of C (2.0) or better.

Additional Requirements for Baccalaureate Degrees
A student may not use courses in the discipline of his or her major to fulfill University General Education Requirements in the following Ways of Knowing areas: Human Behavior, Human Creativity and the Nature of Science.

Students should note that credit toward a degree cannot be obtained for material of what is essentially the same course, but offered in various introductory courses for different audiences.

Evaluation of Writing Proficiency
All students following undergraduate degree programs must pass the University’s Evaluation of Writing Proficiency. See the Undergraduate Writing Program Requirements section of this catalog for more information.

Assessment Requirement
In response to demands by the University’s accrediting agencies, including the Southern Association of Colleges and Schools – Commission on Colleges and the State Council or Higher Education for Virginia, Old Dominion University has developed an institution-wide plan to assess the quality of its academic programs and services. The plan calls for the assessment of student learning at the beginning, during, and at the end of the college experience.

Upon enrollment in the University and again prior to the completion of degree requirements, all undergraduate students must take one or more measures related to the University’s assessment plan. Students will be notified about the requirement to complete the measures through their University email address. The email invitations will contain a link to the University’s web-based assessment tool where the measures can be completed at the student’s convenience. Assessment results are used for program improvements and thus are not a part of the student’s transcript.

Sanctions for Noncompliance with Assessment Testing Requirement
All undergraduate students are required to participate in the assessment program. Failure to take assessments when required to do so may preclude the student’s right to register for the ensuing semester, or in the case of seniors, receive the baccalaureate degree.

The University will make all reasonable efforts to assure that students have ample opportunities to complete the required assessments. However, certain precautions will be taken to ensure that students submit to the assessment measures and that they take the measures seriously. Further information regarding sanctions procedures is available in offices of college deans and the Office of Institutional Effectiveness and Assessment.

University General Education Requirements
All students receiving baccalaureate degrees from Old Dominion University shall complete the University’s General Education Program. At the lower division (freshman and sophomore), the program’s designed courses develop the Skills (Goals 1-2 below) needed for later study and the Ways of Knowing (Goals 3-4) needed to understand the various approaches to knowledge at work in the University. At the upper division (junior and senior), Options B, C and D provide a multidisciplinary experience to broaden the student’s ability to apply the Skills and Ways of Knowing at a more advanced level.

General Education and Prior Learning Assessment
All lower-level requirements within this program may be met by credit awarded to students who are able to demonstrate appropriate prior learning that fulfills the objectives of the particular Skills and Ways of Knowing requirements. Though not all learning and experiences are worthy of being recognized with the reward of academic credit, the principle that supports the policy is that many valid learning experiences worthy of such credit do take place outside of the traditional classroom setting. For procedures to meet General Education Requirements in this manner, please consult the section of this Catalog on Prior Learning Assessment Credit Options at the Undergraduate Level and visit the Prior Learning Assessment web site at https://www.odu.edu/academics/academic-records/evaluation-of-credit/prior-learning/.

Undergraduate Degree Requirements

1 Undergraduate Degree Requirements
**General Education Philosophy**

The General Education program at Old Dominion University represents the common core of the baccalaureate degree. It prepares students for pursuing a major, for broadening their views of life, and for understanding an increasingly global and diverse world. It provides students with the basic skills and intellectual perspectives to engage in the search for knowledge. The General Education program develops analytical and critical thinking skills and the ability to make reasoned judgments. Students will also discover that learning is a complex, multifaceted, and lifelong endeavor.

**General Education Goals and Objectives**

The Goals (1-5) and particular objectives of General Education are as follows:

1. Develop and demonstrate effective uses of language.
   a. Develop written communication skills.
   b. Develop oral communications skills.
   c. Develop ability to use a foreign language and learn about another culture.
   d. Develop written communication skills in the major at the upper-division level.

2. Develop mathematical and information literacy.
   a. Develop basic mathematical competence.
   b. Develop information literacy competence.

3. Develop an understanding of the natural sciences and technology and their contributions to human culture.
   a. Understand the concepts and methods of the natural sciences.
   b. Understand the nature of technology and its impacts on society and the environment.

4. Develop an understanding of human behavior, society and culture, with specific attention to technology, international perspectives and issues related to ethnicity, race and gender.
   a. Develop an understanding of history and the ability to think critically about the past.
   b. Think critically about beliefs, values, and moral issues that have shaped human society.
   c. Critically analyze the fine and performing arts and their contribution to culture.
   d. Critically analyze literature and its contribution to culture.
   e. Develop an understanding of behavioral, political, economic, and social systems.

5. Integrate knowledge at the advanced level.
   Option A. Complete a minor, second major or second degree.
   Option B. Complete an interdisciplinary minor.
   Option C. Complete international business and regional courses or an approved certification program such as teaching licensure.
   Option D. Complete upper-division course work from another college or component (majors in the College of Arts and Letters may select from the Arts and Humanities component or the Social Sciences component depending on the major) outside of and not required by the major.

Students may not use courses in the discipline of their declared major to fulfill University General Education Requirements in the following Ways of Knowing areas: Human Behavior, Human Creativity and the Nature of Science.

Since the Skills and Ways of Knowing are needed for major courses and Upper-Division General Education, students should meet those requirements during their freshman and sophomore years.

**Transfer Policies for General Education Requirements**

Students who have received any of the following associate degrees from Richard Bland College or the Virginia Community College System have met all lower-division General Education requirements, except those specified as major or college requirements and requirements for completion of the undergraduate writing program: Associate of Arts (A.A.), Associate of Science (A.S.) with any major other than general studies (see the next paragraph for additional information), and Associate of Arts and Sciences (A.A. and S.), including the A.A. & S. with a major in general studies.

Effective Fall 2010, the A.S. degrees in general studies that are offered by those institutions whose general studies degrees are recognized as transfer degrees by the State Council of Higher Education for Virginia will also be guaranteed acceptance as meeting lower-division General Education Requirements. A.S. degrees in general studies received from those institutions whose general studies degrees are not recognized by the State Council of Higher Education for Virginia will be examined individually to determine whether the degrees are university parallel programs and eligible for lower-division General Education requirement waivers.

Students who have earned an Associate of Applied Science (A.A.S.) degree from the Virginia Community College System that includes the required General Education courses have met all lower-division General Education requirements except those specified as major or college requirements and the requirements for completion of the undergraduate writing program. College-parallel programs at other community colleges or systems (consistent with the requirements of degrees from the Virginia Community College System) are also accepted as meeting lower-division General Education requirements and are reviewed by the Office of Undergraduate Admissions. Transfer students should be aware that even though University lower-division General Education Requirements may have been met, college, school and/or departmental requirements must still be met. Students must earn a grade of C (2.0) or better in order to receive the credit hours associated with classes taken at other regionally accredited institutions.

Policies governing the transfer of General Education Requirements can be found in the Admissions section of this catalog. See the transfer student website for the complete listing of articulation agreements at: https://www.odu.edu/transfer/articulation-agreements/ (https://www.odu.edu/transfer/articulation-agreements/).

**Lower-Division Requirements (freshman and sophomore years)**

**I. Skills**

Completion of course work in the skills areas ensures that all students possess the basic tools with which to pursue their major interests.

**A. Written Communication**

Students are advised to consult the department of their major program and the Undergraduate Writing Program Requirements section of this catalog.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 110C</td>
<td>English Composition (grade of C or better required)</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ENGL 211C</td>
<td>Introduction to Academic Writing (grade of C or better required)</td>
<td></td>
</tr>
<tr>
<td>ENGL 221C</td>
<td>Introduction to Writing in Business, Education and Social Sciences (grade of C or better required)</td>
<td></td>
</tr>
<tr>
<td>ENGL 231C</td>
<td>Introduction to Technical Writing (grade of C or better required)</td>
<td></td>
</tr>
</tbody>
</table>

Undergraduate students must pass ENGL 110C with a grade of C (2.0) or better in order to qualify to register for ENGL 211C or ENGL 221C or ENGL 231C.

Students must also pass ENGL 211C or ENGL 221C or ENGL 231C with a grade of C (2.0) or better to qualify to register for a writing intensive (W) course.

| Total Hours | 6 |

A portfolio waiver option is available for ENGL 110C and ENGL 211C/ENGL 221C/ENGL 231C. Please refer to the section on Academic Testing and Placement (http://catalog.odu.edu/undergraduate/studentresourcesandservices#academictestingandplacement) in this Catalog for more information.
B. Oral Communication

Select one of the following courses

- COMM 101R Public Speaking
- COMM 103R Voice and Diction
- COMM 112R Introduction to Interpersonal Communication
- DANC/THEA 152R Acting One

Total Hours: 3

Students may meet this requirement by completing an oral communication course appropriate to the student’s program of study or through an approved course(s) within the major. Students are advised to consult the department of their major program.

Majors approved to meet this requirement through major courses are:
- College of Arts and Letters – communication, music composition, music education, all theatre arts majors, world languages and cultures concentrations in French, German and Spanish, and world languages and cultures teacher preparation; College of Education and Professional Studies - human services, occupational and technical studies concentrations in industrial technology and training specialist; College of Health Sciences - medical technology, nursing, dental hygiene, health sciences health services administration major, health sciences cytotechnology track and public health; and College of Sciences - ocean and earth science.

Students who complete the required courses in their major that meet oral communication and then change to a major that does not meet the requirement through courses in the major will have met the oral communication requirement for the new major.

C. Mathematics

Select one of the following courses

- MATH 101M An Introduction to Mathematics for Critical Thinking
- MATH 102M College Algebra
- MATH 103M College Algebra with Supplemental Instruction
- MATH 162M Precalculus I
- STAT 130M Elementary Statistics

Total Hours: 3

For the appropriate course, the major program should be consulted. Some programs require more advanced 200-level courses.

Students should strive to complete the mathematics General Education requirement within their first 30 hours at Old Dominion University and are expected to have completed the requirement before the end of their first 60 hours at the University. Students should be aware that waivers of the mathematics General Education requirement are not granted, and all students are required to complete this requirement before graduating.

D. Language and Culture*

Select 6 hours from the following courses unless the language requirement was met through high school coursework, transfer credit, or exemption.

- ARAB 111F Beginning Arabic
- CHIN 111F Beginning Chinese
- FR 101F & FR 102F Beginning French I and Beginning French II
- GER 101F & GER 102F Beginning German I and Beginning German II
- HEBR 111F Beginning Hebrew I
- ITAL 101F & ITAL 102F Beginning Italian I and Beginning Italian II
- JAPN 111F Beginning Japanese
- LATN 101F & LATN 102F Beginning Latin I and Beginning Latin II
- PRTG 101F & PRTG 102F Beginning Portuguese I and Beginning Portuguese II
- RUS 101F & RUS 102F Beginning Russian I and Beginning Russian II
- SPAN 101F & SPAN 102F Beginning Spanish I and Beginning Spanish II
- SPAN 121F Intensive Beginning Spanish

Total Hours: 6

111F courses are six credit hours each. Students may meet the language and culture requirement by successfully completing the third level in one foreign language or the second level in each of two foreign languages in high school or by completing a single foreign language at the 102F or 111F level or equivalent work from another institution. Students who have had some foreign language experience but are unable to be exempted from this requirement may complete just the 121F course in the case of Spanish or the 102F course in foreign languages if scores on the CEEB Foreign Language Achievement Test so indicate.

The College of Arts and Letters and the Strome College of Business require foreign language proficiency at the fourth-semester level for students pursuing Bachelor of Arts degrees.

Students whose native language is not English are exempt from taking a foreign language for General Education. Students pursuing degrees that require proficiency beyond the 100 level must be certified by the World Languages and Cultures Department to obtain a waiver of the 200-400 level courses.

American Sign Language courses taken in high school or transferred to Old Dominion University from another institution are accepted by Old Dominion University to meet General Education requirements in language and culture. American Sign Language courses transferred from another institution are accepted to meet the foreign language requirement for B.A. degrees in the Strome College of Business and the College of Arts and Letters except for Asian Studies, foreign languages and international studies.

* Does not apply to students earning high school diplomas before December 31, 1985.

E. Information Literacy and Research

Select one of the following courses

- COMM 272G Digital Literacy
- CS 120G Introduction to Information Literacy and Research
- CS 121G Introduction to Information Literacy and Research for Scientists
- HLTH 120G Information Literacy for Health Professionals
- HNRS 250G Media and Info Literacy in the Google Age
- IT 150G Basic Information Literacy and Research
- LIBS 110G Information Literacy for the Digital Age
- OEAS 130G Research Skills and Information Literacy for the Natural Sciences
- PHIL 290G Philosophy of Digital Culture
- STEM 251G Computer Literacy: Communication and Information

Total Hours: 3

Students may meet this requirement in the major and are advised to consult the department of their major program.

Majors approved to meet this requirement through major courses are:
- College of Arts and Letters – African American and African Studies depending on elective choice, Asian Studies depending on elective choice, geography, history, history teacher preparation, international studies depending on elective choice, and political science; College of Engineering and Technology - all majors; College of Health Sciences – dental hygiene and nursing; College of Sciences - biochemistry depending on course selection, biology, chemistry depending on course selection, chemistry...
with teaching licensure depending on course selection, and ocean and earth science.

Students who complete the required courses in their major that meet information literacy and research and then change to a major that does not meet the requirement through courses in the major will have met the information literacy and research requirement for the new major.

Engineering and engineering technology majors who complete ENGT 111 but do not complete the additional major courses to meet information literacy and research must complete CS 112 to meet the requirement or they may complete a separate course with the "G" designation.

II. Ways of Knowing

Courses in the Ways of Knowing develop the students’ critical and analytical thinking abilities. They also develop understanding of the various approaches to knowledge, the contributions various academic disciplines can make to solving specific problems, and the effective use of the English language. Courses in the Ways of Knowing also develop and reinforce written communication skills and include relevant insights into technology. In addition, courses within each Way of Knowing focus on objectives unique to that way of knowing.

A. Human Behavior

The objective of this Way of Knowing is to enable students to learn about human behavior in changing contexts. The courses will address how ideological, scientific, and ethical judgments affect human behavior in Western and non-Western cultures. They will also offer perspectives on the challenges, concerns, and contributions of diverse groups such as women and minorities.

Courses that meet the human behavior Way of Knowing are:

Select one of the following courses 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAST 100S</td>
<td>Introduction to African American Studies</td>
</tr>
<tr>
<td>ANTR 110S</td>
<td>Introduction to Anthropology</td>
</tr>
<tr>
<td>COMM 200S</td>
<td>Introduction to Human Communication</td>
</tr>
<tr>
<td>CRJS 215S</td>
<td>Introduction to Criminology</td>
</tr>
<tr>
<td>ECON 200S</td>
<td>Basic Economics</td>
</tr>
<tr>
<td>ECON 201S</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>ECON 202S</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>ENTR 218S</td>
<td>Introduction to Entrepreneurship</td>
</tr>
<tr>
<td>FIN 210S</td>
<td>Personal Financial Literacy</td>
</tr>
<tr>
<td>GEOG 100S</td>
<td>Cultural Geography</td>
</tr>
<tr>
<td>GEOG 101S</td>
<td>Environmental Geography</td>
</tr>
<tr>
<td>HMS 200S</td>
<td>Personal Health and Wellness</td>
</tr>
<tr>
<td>POLS 100S</td>
<td>Introduction to International Politics</td>
</tr>
<tr>
<td>POLS 101S</td>
<td>Introduction to American Politics</td>
</tr>
<tr>
<td>POLS 102S</td>
<td>Introduction to Comparative Government and Politics</td>
</tr>
<tr>
<td>PRTS 210S</td>
<td>Leisure and Human Behavior</td>
</tr>
<tr>
<td>PSYC 201S</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>PSYC 203S</td>
<td>Lifespan Development</td>
</tr>
<tr>
<td>SEPS 203S</td>
<td>Dress, Culture and Society</td>
</tr>
<tr>
<td>SOC 201S</td>
<td>Introduction to Sociology</td>
</tr>
<tr>
<td>SOC 203S</td>
<td>Diversity and Society</td>
</tr>
<tr>
<td>WMST 201S</td>
<td>Introduction to Women's Studies</td>
</tr>
</tbody>
</table>

Total Hours 3

B. Human Creativity

This Way of Knowing emphasizes artistic creative endeavor and appreciation and the history of the arts. The courses include field experience with the professional arts community in Hampton Roads as well as with the faculty of relevant departments. The objectives are to foster an appreciation of aesthetic experiences, develop abilities to make reasoned aesthetic judgments and develop an understanding of diverse cultures.

Courses that meet the human creativity Way of Knowing are:

Select one of the following courses 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 121A</td>
<td>Introduction to the Visual Arts</td>
</tr>
<tr>
<td>ARTS 122A</td>
<td>Visual Communication</td>
</tr>
<tr>
<td>COMM/THEA</td>
<td>Film Appreciation</td>
</tr>
<tr>
<td>DANC 185A</td>
<td>Dance and Its Audience</td>
</tr>
<tr>
<td>MUSC 264A</td>
<td>Music in History and Culture</td>
</tr>
<tr>
<td>SEPS 223A</td>
<td>Visual Merchandising and Display</td>
</tr>
<tr>
<td>THEA 241A</td>
<td>The Theatre Experience</td>
</tr>
</tbody>
</table>

Total Hours 3

C. Interpreting the Past

The objective of this Way of Knowing is to provide an understanding of historical analysis for non-history majors.

Courses that meet the interpreting the past Way of Knowing are:

Select one of the following courses 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 100H</td>
<td>Interpreting the World Past Since 1500</td>
</tr>
<tr>
<td>HIST 101H</td>
<td>Interpreting the Asian Past</td>
</tr>
<tr>
<td>HIST 102H</td>
<td>Interpreting the European Past</td>
</tr>
<tr>
<td>HIST 103H</td>
<td>Interpreting the Latin America Past</td>
</tr>
<tr>
<td>HIST 104H</td>
<td>Interpreting the American Past</td>
</tr>
<tr>
<td>HIST 105H</td>
<td>Interpreting the African Past</td>
</tr>
</tbody>
</table>

Total Hours 3

D. Literature

This Way of Knowing emphasizes the contribution of literature to culture. Through critical reading and analysis, students will develop the ability to make effective use of the English language and informed aesthetic judgments about style and content.

Courses that meet the literature Way of Knowing are:

Select one of the following courses 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 112L</td>
<td>Introduction to Literature</td>
</tr>
<tr>
<td>ENGL 114L</td>
<td>American Writers, American Experiences</td>
</tr>
<tr>
<td>WCS 100L</td>
<td>Introduction to World Literatures and Cultures</td>
</tr>
</tbody>
</table>

Total Hours 3

E. The Nature of Science

This Way of Knowing requires two semesters of natural science. A student may fulfill the requirement with two non-sequential natural science classes with labs unless a sequence is specifically required for the major. These courses introduce the disciplines and the methods of science and develop the abilities to make reasoned judgments based on scientific considerations.

Courses that meet the nature of science Way of Knowing are:

Select two of the following courses. The combination of BIOL 150 and BIOL 151 plus BIOL 240 and BIOL 241 or the combination of BIOL 150 and BIOL 151 plus BIOL 250 and BIOL 251 satisfies four credits of the nature of science requirement. 8

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 105N</td>
<td>Biology for Nonscience Majors I</td>
</tr>
<tr>
<td>BIOL 106N</td>
<td>Biology for Nonscience Majors II</td>
</tr>
<tr>
<td>BIOL 110N</td>
<td>Environmental Sciences</td>
</tr>
<tr>
<td>&amp; BIOL 111N</td>
<td>and Environmental Sciences Lab</td>
</tr>
<tr>
<td>&amp; BIOL 112N</td>
<td>and Environment and Man Laboratory</td>
</tr>
<tr>
<td>&amp; BIOL 117N</td>
<td>and Introduction to Human Biology</td>
</tr>
<tr>
<td>&amp; BIOL 118N</td>
<td>and Introduction to Human Biology Lab</td>
</tr>
<tr>
<td>BIOL 121N</td>
<td>General Biology I</td>
</tr>
<tr>
<td>&amp; BIOL 122N</td>
<td>and General Biology I Lab</td>
</tr>
</tbody>
</table>

Total Hours 3

Undergraduate Degree Requirements 4
Students who complete the required courses in their major that meet philosophy and ethics and then change to a major that does not meet the requirement through courses in the major will have met the philosophy and ethics requirement for the new major.

G. Impact of Technology

It is important for students to understand not only how a technology functions, but also how technology affects society.

Courses in the impact of technology Way of Knowing are intended to develop students’ abilities to make reasoned judgments about the impact of technological development upon world cultures and the environment as well as upon individuals and societies.

Courses that meet the impact of technology Way of Knowing are:

Select one of the following courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 470T</td>
<td>Diseases that Changed our World</td>
</tr>
<tr>
<td>CHEM 171T</td>
<td>Influence of Polymers on Society</td>
</tr>
<tr>
<td>CHEM 173T</td>
<td>Nutritional Biochemistry</td>
</tr>
<tr>
<td>CHEM 175T</td>
<td>Neurotechnology</td>
</tr>
<tr>
<td>CHEM 339T</td>
<td>The Chemistry of the Environment</td>
</tr>
<tr>
<td>CHEM 343T</td>
<td>Science and Technology in Art</td>
</tr>
</tbody>
</table>

Total Hours 8

F. Philosophy and Ethics

Because of the many decisions students will be called upon to make in their personal and professional lives, they will need an appreciation and understanding of philosophical, religious, and ethical foundations to help them to make informed, intelligent choices. Further, as the pace of change and interdependency in the world accelerates, it is important that students be given an ample opportunity to critically examine philosophy and ethical values and to understand how philosophical and ethical issues affect decision-making in professional disciplines.

Courses that meet the philosophy and ethics Way of Knowing are:

Select one of the following courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 110P</td>
<td>Introduction to Philosophy</td>
</tr>
<tr>
<td>PHIL 120P</td>
<td>Logic and Philosophy</td>
</tr>
<tr>
<td>PHIL 230E</td>
<td>Introduction to Ethics</td>
</tr>
<tr>
<td>PHIL 250E</td>
<td>World Religions: Beliefs and Values</td>
</tr>
<tr>
<td>PHIL 303E</td>
<td>Business Ethics</td>
</tr>
<tr>
<td>PHIL 344E</td>
<td>Environmental Ethics</td>
</tr>
<tr>
<td>PHIL 345E</td>
<td>Bioethics</td>
</tr>
<tr>
<td>PHIL 355E</td>
<td>Cybersecurity Ethics</td>
</tr>
<tr>
<td>PHIL 442E</td>
<td>Studies in Applied Ethics</td>
</tr>
</tbody>
</table>

Total Hours 3

Students may meet this requirement in the major and are advised to consult the department of their major program. Majors approved to meet this requirement through major courses are: College of Arts and Letters – cybersecurity depending on elective choice, cyber operations and interdisciplinary studies majors in game studies and design, leadership, and professional writing depending on elective choice; College of Education and Professional Studies – sport management; College of Engineering and Technology – all majors if ENMA 480 is completed; and College of Health Sciences – dental hygiene, dental hygiene degree completion, health sciences health services administration major, and public health.
design, general engineering technology, leadership, and professional writing depending on elective choice, all music majors; theatre education, and women’s studies; College of Business—all majors except the B.A. in economics; College of Education and Professional Studies—early childhood education, elementary education, exercise science, health and physical education teacher preparation, marketing education, all majors in occupational and technical studies, special education, and technology education; College of Engineering and Technology—all majors except civil engineering technology and modeling and simulation engineering; College of Health Sciences—health sciences health services administration major and public health; College of Sciences - ocean and earth science.

Students who complete the required courses in their major that meet impact of technology and then change to a major that does not meet the requirement through courses in the major will have met the impact of technology requirement for the new major.

### Honors Courses that Meet General Education Requirements*

<table>
<thead>
<tr>
<th>Skills</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Communication</td>
<td>ENGL 126C</td>
<td>Honors: English Composition</td>
<td>3</td>
</tr>
<tr>
<td>Oral Communication</td>
<td>COMM 126R</td>
<td>Honors: Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Information Literacy and Research</td>
<td>CS 126G</td>
<td>Honors: Introduction to Information Literacy and Research</td>
<td>3</td>
</tr>
</tbody>
</table>

| Ways of Knowing         | COMM 226S     | Honors: Introduction to Human Communication | 3 |
| Human Behavior          | CRJS 226S     | Honors: Introduction to Criminology       | 3 |
|                         | ECON 226S     | Honors: Principles of Macroeconomics     | 3 |
|                         | ECON 227S     | Honors: Principles of Microeconomics     | 3 |
|                         | GEOG 126S     | Honors: Cultural Geography              | 3 |
|                         | POLS 126S     | Honors: Introduction to American Politics| 3 |
|                         | POLS 127S     | Honors: Introduction to International Politics | 3 |
|                         | PSYC 226S     | Honors: Introduction to Psychology       | 3 |
|                         | SOC 226S      | Honors: Introduction to Sociology        | 3 |
|                         | WMST 226S     | Honors: Women in A Changing World        | 3 |

| Human Creativity         | ARTS 126A     | Honors: Art as Experience              | 3 |
|                         | ARTH 127A     | Honors: Introduction to the Visual Arts | 3 |
|                         | COMM 227A     | Honors: Film Appreciation              | 3 |
|                         | MUSC 126A     | Honors: Music in History and Culture   | 3 |
|                         | THEA 227A     | Honors: Film Appreciation              | 3 |

| Interpreting the Past    | HIST 126H     | Honors: Interpreting the American Past  | 3 |
|                         | HIST 127H     | Honors: Interpreting the European Past  | 3 |

| Literature              | ENGL 127L     | Honors: Introduction to Literature      | 3 |

| The Nature of Science   | BIOL 136N     | Honors General Biology I                | 4 |
|                         | & BIOL 137N   | and Honors General Biology I Lab        | 4 |
|                         | BIOL 138N     | Honors General Biology II               | 4 |
|                         | & BIOL 139N   | and Honors General Biology II Lab       | 4 |
|                         | OEAS 126N     | Honors: Introductory Oceanography       | 4 |
|                         | PHYS 126N     | Honors: Introductory Astronomy          | 8 |
|                         | & PHYS 127N   | and Honors: Introductory Astronomy      | 8 |
|                         | PHYS 226N     | Honors: University Physics I            | 8 |
|                         | & PHYS 227N   | and Honors: University Physics II       | 8 |

### Philosophy and Ethics

|                  | PHIL 126P    | Honors: Introduction to Philosophy     | 3 |
|                  | PHIL 227E    | Honors: World Religions: Beliefs and Values | 3 |
|                  | PHIL 228E    | Honors: Introduction to Ethics         | 3 |

* Courses listed are open only to students in the Perry Honors College.

### Upper-Division Requirements (junior and senior years)

#### Writing Intensive Course in the Major

All students are required to demonstrate written communication skills in the major by taking a Writing Intensive (W) course at the upper-division level. All undergraduate students must complete their W course in the major (3 credits) at Old Dominion University and earn a grade of C (2.0) or better in order to earn a baccalaureate degree.

Criteria for Writing Intensive courses include:

1. Students will demonstrate, in a series of individual (not group) assignments, their mastery of the subject in a discipline, through the writing of formal documents.
2. For each writing assignment, the instructor will provide feedback to the student, evaluating content and writing style (organization, development, logic, coherence and mechanics).
3. Types of documents for writing assignments include essays, laboratory reports, project reports, critiques of performances, research proposals, case studies, journal article reviews, book reviews, creative writing, written interviews, and other forms appropriate to a particular discipline.
4. A maximum of 10% total of identified graded writing in the form of essays for tests, quizzes, and/or a mid-term examination (not a final exam) may be included. It is to be evaluated for both content and writing style as indicated in (b) above.
5. Graded writing requirements comprise at least 51% of the overall course grade.

#### Upper-Division Studies Outside the Major

Students are required to complete Option A, B, C or D to meet the upper-division general education requirement. In addition to the completion of courses in the area of the major field, a candidate for a baccalaureate degree may select Option A, any University-approved minor, second degree or second major. The minor may be chosen to support the major, to offer greater job opportunities to the student on graduation, or to provide academic recognition of study in a second disciplinary area. A baccalaureate degree candidate may also choose an integrative disciplinary experience through the selection of Option B, an Interdisciplinary Minor; Option C, International Business and Regional Courses or an approved Certification Program such as Teaching Licensure; or Option D, six hours of elective upper-division course work from outside of and not required by the student’s major and college.

#### Option A: Any University-approved minor*

(minimum of 12 hours determined by the department), second degree, or second major

Students who complete the course requirements for the minor, but who do not attain a 2.00 grade point average in the minor, may request that the course work be approved to meet the upper-division general education requirement. The request may be initiated through the student’s advisor and the associate dean of their college and submitted to the assistant vice president for undergraduate studies in the Office of Academic Affairs.

Students whose requests are approved will meet the upper-division requirement, but they will not receive credit for the minor.
Bachelor of Science in Business Administration majors pursuing a minor or second major in the Strome College of Business other than Economics, Military Leadership (minor only) or Public Service (minor only) must also take six hours of 200-400 level courses outside the College, or in economics, or in military leadership or in study abroad. Students majoring in Economics who pursue a minor or second major in the Strome College of Business fulfill upper-division general education requirements and do not need to take the six hours of 200-400 level courses outside the College.

Option B: Any University-approved interdisciplinary minor (specifically 12 hours, three of which may be in the major)

Three credit hours in the interdisciplinary minor may be in the major if a major course is listed as an option for the interdisciplinary minor. As such, it will be credited toward both the major and the interdisciplinary minor. Interdisciplinary minors require 12 credit hours of 300/400-level courses selected from at least two different disciplines with a maximum of six credits from any one discipline. Course substitutions may be approved by the interdisciplinary minor coordinator.

Approved interdisciplinary minors are as follows.

**Administrative Leadership and Ethics for Professional Roles Interdisciplinary Minor**

James Van Dore, Department of Philosophy and Religious Studies, Coordinator

The intent of the Administrative Leadership and Ethics for Professional Roles interdisciplinary minor is to develop management-related skills. The minor is designed to improve the student’s professionalism through an understanding of applied ethics, effective communication, processes in organizations, applied psychology, and legal issues in the workplace. An appreciation for the qualities of leadership, the functions of administration, and a sensitivity for ethical decision making will allow the student to apply for a wider variety of positions.

Course options are as follows:

- **CHP 400** Ethics in Health Administration 3
- **CHP 450** Public and Community Health Administration 3
- **CHP 480** Health Ethics and the Law 3
- **COMM 351** Interpersonal Communication in Organizations 3
- **DNTH 416** Administrative Leadership and Professional Development 3
- **ENGL 486** Media Law and Ethics 3
- **ENHV 402W** Environmental and Occupational Health Administration and Law 3
- **HLTH 425** Leadership and Management for Health Professionals 3
- **MGMT 325** Contemporary Organizations and Management 3
- **MGMT 350** Employee Relations Problems and Practices 3
- **MKTG 414** Ethics and Social Issues in Administration 3
- **MLS 403W** Management in the Clinical Setting 3
- **NMED 475W** Administration and Management in Nuclear Medicine Technology 3
- **NURS 480W** Nursing in the Health Care System: Leadership 3
- **NURS 490W** Nursing Leadership 3
- **PAS 301** Ethics, Governance and Accountability in Public Service 3
- **PHIL 303E** Business Ethics 3
- **PHIL 344E** Environmental Ethics 3
- **PHIL 345E** Bioethics 3
- **PHIL 355E** Cybersecurity Ethics 3
- **PSYC 303** Industrial/Organizational Psychology 3
- **SMGT 450W** Ethics and Morality in Sport 3

**Biomedical Engineering Interdisciplinary Minor**

Anna Bulysheva, Department of Electrical and Computer Engineering, Coordinator

This interdisciplinary minor is for students who would like to learn about processes encountered in biomedical engineering innovation and enhance their ability to integrate knowledge from different disciplines with principles used in biomedical engineering. The minor offers an opportunity for students to be recognized for study in this growing multidisciplinary field and to enhance competitiveness for job opportunities upon graduation.

Course prerequisites for BME 403, BME 404 and BME 406 are BIOL 240 or BIOL 250 and MATH 200, MATH 205 or MATH 211. Prerequisite courses are not included in the calculation of the grade point average for the minor.

Course requirements are as follows:

Select two of the following BME courses: 6

- **BME 403** Introduction to Mathematical Modeling in Physiology
- **BME 404** Introduction to Biomaterials
- **BME 406** Transport Phenomena in Biomedical Systems

Select two elective courses from the following: 6

- **BIOL 446** Comparative Biomechanics
- **BIOL 460** Frontiers in Nanoscience and Nanotechnology
- **BIOL 490** Advanced Human Physiology
- **BIOL 496** Topics in Biological Sciences (approved by minor advisor)
- **CHEM 443** Intermediate Biochemistry
- **EXSC 322** Anatomical Kinesiology
- **EXSC 417** Biomechanics
- **ECE 454** Introduction to Bioelectricity
- **ECE 462** Introduction to Medical Image Analysis (MIA)
- **ECE 464** Biomedical Applications of Low Temperature Plasmas
- **or BIOL 464** Biomedical Applications of Low Temperature Plasmas
- **HLSC 405** Interprofessional Study Abroad on Global Health
- **MAE 303** Mechanics of Fluids
- **MAE 440** Introduction to Finite Element Analysis
- **MLS 324** Clinical Instrumentation and Electronics
- **MSIM 451** Analysis for Modeling and Simulation
- **NMED 331** Fundamental Concepts in Nuclear Medicine Technology
- **NURS 456** Global Health Perspectives

Students have the option to substitute one course from those that satisfy their major requirements for one of the minor electives with approval of the minor coordinator.

Students interested in medical simulation are encouraged to select their electives from ECE 462 and MAE 440.

**Children’s Rights Interdisciplinary Minor**

Jessica Huffman, Sociology and Criminal Justice, Coordinator

This interdisciplinary minor is focused on the exploration of child rights within and across diverse disciplines and in the U.S. and internationally.
This perspective challenges approaches in the various disciplines that have in their study of children traditionally denied or failed to recognize children’s human rights and dignity. In place of the traditional perspectives, courses in this interdisciplinary minor frame the study of children within the larger framework of human rights, more specifically, children’s rights and status as a group within society in social science research and theory, literature, the arts, humanities, education, counseling, law and public policy.

Course options are as follows:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 427</td>
<td>Children's Communication Theory and Research</td>
<td>3</td>
</tr>
<tr>
<td>CRJS/SOC 403</td>
<td>Violence in the World of Children</td>
<td>3</td>
</tr>
<tr>
<td>CRJS/SOC 408</td>
<td>Children's Rights and the Law</td>
<td>3</td>
</tr>
<tr>
<td>HMSV 448</td>
<td>Interventions and Advocacy with Children</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 351</td>
<td>Child Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 402</td>
<td>Sociology of Child Welfare</td>
<td>3</td>
</tr>
<tr>
<td>TLED 476</td>
<td>Practical Applications in the World of Children</td>
<td>3</td>
</tr>
</tbody>
</table>

**Cybercrime Interdisciplinary Minor**

Roderick Graham, Program Coordinator and Faculty Advisor (rgraham@odu.edu)

The interdisciplinary minor in cybercrime provides students with an understanding of crime and deviance in the digital environment. Students will be required to take two introductory courses in the cybercrime and cybersecurity majors, respectively. In these core courses, students will learn the fundamental issues involved in cybersecurity (computer system architectures, critical infrastructures, cyber threats and vulnerabilities) and cybercrime (defining and describing the different types of computer-related crimes, the techniques used by law enforcement, and the legal issues inherent in combating cybercrime). They can then expand their knowledge by taking electives in psychology, political science, criminal justice, information technology, or cybersecurity. The minor aspires to develop graduates who can think critically about how human behavior impacts and is impacted by computer technologies.

Course substitutions may be approved by the interdisciplinary minor coordinator.

Prerequisite

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJS 215S</td>
<td>Introduction to Criminology **</td>
<td></td>
</tr>
<tr>
<td>CRJS 310</td>
<td>Cybercriminology: Foundations</td>
<td>6</td>
</tr>
<tr>
<td>CYSE 300</td>
<td>Introduction to Cybersecurity</td>
<td></td>
</tr>
<tr>
<td>CRJS 340</td>
<td>White-Collar Crime</td>
<td></td>
</tr>
<tr>
<td>CRJS 344</td>
<td>Social Science and Crime Mapping</td>
<td></td>
</tr>
<tr>
<td>IT 315</td>
<td>Introduction to Networking and Security</td>
<td></td>
</tr>
<tr>
<td>IT 360T</td>
<td>Principles of Information Technology</td>
<td></td>
</tr>
<tr>
<td>CRJS/CYSE 406</td>
<td>Cyber Law</td>
<td></td>
</tr>
<tr>
<td>CRJS 395/396/495/496</td>
<td>Topics in Criminal Justice ***</td>
<td></td>
</tr>
<tr>
<td>CYSE 407</td>
<td>Digital Forensics</td>
<td></td>
</tr>
<tr>
<td>PHIL 355E</td>
<td>Cybersecurity Ethics</td>
<td></td>
</tr>
<tr>
<td>PSYC 307</td>
<td>Institutionalization of Human-Centered Computing</td>
<td></td>
</tr>
<tr>
<td>PSYC 344</td>
<td>Human Factors</td>
<td></td>
</tr>
<tr>
<td>POLS 350T</td>
<td>Technology and War</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours 12

**The two courses from the core and the two electives must be selected from at least two different disciplines with no more than six credits from any one discipline.

*** Must be approved by the program coordinator.

**Cybersecurity Interdisciplinary Minor**

Saltuk Karahan, Department of Political Science and Geography, Coordinator (skarahan@odu.edu)

This interdisciplinary minor in cybersecurity is focused on the technological, structural, social, and legal frameworks used to secure computer networks and software. The study of cybersecurity combines multiple fields including computer science, engineering, information technology, criminal justice, and philosophy, to name a few. In an effort to promote the security of computer networks, software, and cyber information, an interdisciplinary understanding about technological, legal, philosophical, and structural aspects of cyber crime is needed. This minor will provide students from different majors the knowledge they need to prevent or respond to cyber incidents they are likely to encounter in their careers.

Course options are as follows:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJS 310</td>
<td>Cybercriminology: Foundations</td>
<td>3</td>
</tr>
<tr>
<td>CS 462</td>
<td>Cybersecurity Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>CS 463</td>
<td>Cryptography for Cybersecurity</td>
<td>3</td>
</tr>
<tr>
<td>CS 464</td>
<td>Networked Systems Security</td>
<td>3</td>
</tr>
<tr>
<td>CS 465</td>
<td>Information Assurance for Cybersecurity</td>
<td>3</td>
</tr>
<tr>
<td>CS 466</td>
<td>Principles and Practice of Cyber Defense</td>
<td>3</td>
</tr>
<tr>
<td>CYSE 300</td>
<td>Introduction to Cybersecurity</td>
<td>3</td>
</tr>
<tr>
<td>CYSE 301</td>
<td>Cybersecurity Techniques and Operations</td>
<td>3</td>
</tr>
<tr>
<td>CYSE 406</td>
<td>Cyber Law</td>
<td>3</td>
</tr>
<tr>
<td>CYSE 407</td>
<td>Digital Forensics</td>
<td>3</td>
</tr>
<tr>
<td>ECE 416</td>
<td>Cyber Defense Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>ECE 419</td>
<td>Cyber Physical System Security</td>
<td>3</td>
</tr>
<tr>
<td>FIN 443</td>
<td>Enterprise Risk Management</td>
<td>3</td>
</tr>
<tr>
<td>IT 416</td>
<td>Network Server Configuration and Administration</td>
<td>3</td>
</tr>
<tr>
<td>IT 417</td>
<td>Management of Information Security</td>
<td>3</td>
</tr>
<tr>
<td>IT 418</td>
<td>Enterprise Information Assurance</td>
<td>3</td>
</tr>
<tr>
<td>IT 419</td>
<td>Enterprise Cyber Defense</td>
<td>3</td>
</tr>
<tr>
<td>IT 461</td>
<td>Implementing Internet Applications</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 355E</td>
<td>Cybersecurity Ethics</td>
<td>3</td>
</tr>
</tbody>
</table>

The interdisciplinary minor in cybersecurity requires 12 credit hours of 300/400-level courses selected from at least two different disciplines with a maximum of six credits from any one discipline. For completion of the interdisciplinary minor, students must have a minimum overall cumulative grade point average of 2.00 in all courses specified as a requirement for the minor exclusive of lower-level courses and prerequisite courses. At least six hours of upper-level courses must be taken through courses offered by Old Dominion University. Three credit hours may be in the major, if a major course is listed as an option for the interdisciplinary minor. As such, it will be credited toward both the major and the interdisciplinary minor.

**The Designed World Interdisciplinary Minor**

Agnieszka Whelan, Department of Art, Coordinator

This interdisciplinary minor explores the interwoven historical, cultural, aesthetic, perceptual, and technical domains of the designed world. That virtually all aspects of the human-built world are designed is a generally accepted belief; however, it is not given the careful scrutiny it deserves.
Creative planning and critical analysis of design dynamics are emphasized within the context of these course offerings.

Course options are as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 320W</td>
<td>History of Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTH 327</td>
<td>History of Photography</td>
<td>3</td>
</tr>
<tr>
<td>ARTH 435W</td>
<td>Modern Architecture</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 455</td>
<td>Letterpress Printmaking</td>
<td>3</td>
</tr>
<tr>
<td>COMM 341</td>
<td>Lighting Design for Stage and Film</td>
<td>3</td>
</tr>
<tr>
<td>COMM 349</td>
<td>Costume Design for Stage and Camera</td>
<td>3</td>
</tr>
<tr>
<td>COMM 370</td>
<td>The Video Project</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 371W</td>
<td>Communication Across Cultures</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 382</td>
<td>Reporting News for Television and Digital Media</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 477</td>
<td>Language, Gender and Power</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 310</td>
<td>Geography of the City</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 412</td>
<td>Cities of the World</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 344</td>
<td>Human Factors</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 413</td>
<td>Sensation and Perception</td>
<td>3</td>
</tr>
<tr>
<td>SEPS 422</td>
<td>Fashion Product Development</td>
<td>3</td>
</tr>
<tr>
<td>STEM 382</td>
<td>Industrial Design</td>
<td>3</td>
</tr>
</tbody>
</table>

**Energy Engineering Interdisciplinary Minor**

Sandeep Kumar, Department of Civil and Environmental Engineering, Coordinator

This interdisciplinary minor is for students who would like to learn about energy engineering fundamentals, socio-environmental impacts of energy systems, and novel energy engineering technologies. The minor will enhance students' abilities to integrate knowledge from different disciplines with concepts used in energy engineering and offer students the opportunity to be recognized for study in this growing interdisciplinary field.

The course requirements are as follows:

Four courses chosen from: 12

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET 355</td>
<td>Sustainable Building Practices</td>
<td></td>
</tr>
<tr>
<td>CEE 459</td>
<td>Biofuels Engineering</td>
<td></td>
</tr>
<tr>
<td>ECE 303</td>
<td>Introduction to Electrical Power</td>
<td></td>
</tr>
<tr>
<td>ECE 403</td>
<td>Power Electronics</td>
<td></td>
</tr>
<tr>
<td>ECE 471</td>
<td>Introduction to Solar Cells</td>
<td></td>
</tr>
<tr>
<td>ECON 447W</td>
<td>Natural Resource and Environmental Economics</td>
<td>3</td>
</tr>
<tr>
<td>EET 340</td>
<td>Transmission Networks</td>
<td></td>
</tr>
<tr>
<td>EET 370T</td>
<td>Energy and the Environment</td>
<td></td>
</tr>
<tr>
<td>EET 485</td>
<td>Electrical Power Systems</td>
<td></td>
</tr>
<tr>
<td>ENMA 301</td>
<td>Introduction to Engineering Management</td>
<td></td>
</tr>
<tr>
<td>ENMA 302</td>
<td>Engineering Economics</td>
<td></td>
</tr>
<tr>
<td>MAE 411</td>
<td>Mechanical Engineering Power Systems</td>
<td></td>
</tr>
<tr>
<td>MAE 413</td>
<td>Energy Conversion</td>
<td></td>
</tr>
<tr>
<td>MAE 416</td>
<td>Introduction to Solar Energy Engineering</td>
<td></td>
</tr>
<tr>
<td>MET 300</td>
<td>Thermodynamics</td>
<td></td>
</tr>
<tr>
<td>MET 450</td>
<td>Energy Systems</td>
<td></td>
</tr>
<tr>
<td>MET 471</td>
<td>Nuclear Systems I</td>
<td></td>
</tr>
<tr>
<td>OES 415</td>
<td>Waves and Tides</td>
<td></td>
</tr>
<tr>
<td>PHYS 415</td>
<td>Introduction to Nuclear and Particle Physics</td>
<td></td>
</tr>
</tbody>
</table>

One course relevant to energy engineering from the student’s major can also be used as a minor course with the approval of the minor coordinator.

**Entrepreneurship Interdisciplinary Minor**

The entrepreneurship interdisciplinary minor is intended to prepare students to solve business and social problems by creating new ventures within or outside existing organizations.

Requirements for the minor are completion of 12 hours from the following,

ENTR 301 Fundamentals of Entrepreneurship 3

**Functional Expertise: select two courses from the following:** 6

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 300</td>
<td>Accounting for Entrepreneurs</td>
<td></td>
</tr>
<tr>
<td>CHP 440</td>
<td>Finance and Budgeting in Healthcare</td>
<td></td>
</tr>
<tr>
<td>COMM 305</td>
<td>Professional Communication</td>
<td></td>
</tr>
<tr>
<td>COMM 351</td>
<td>Interpersonal Communication in Organizations</td>
<td></td>
</tr>
<tr>
<td>ENMA 401</td>
<td>Project Management</td>
<td></td>
</tr>
<tr>
<td>ENTR 410</td>
<td>Managing Small and Family Businesses</td>
<td></td>
</tr>
<tr>
<td>ENMA 421</td>
<td>Decision Techniques in Engineering</td>
<td></td>
</tr>
<tr>
<td>FIN 323</td>
<td>Introductory Financial Management</td>
<td></td>
</tr>
<tr>
<td>HNRS 401</td>
<td>Social Entrepreneurship</td>
<td></td>
</tr>
<tr>
<td>MGMT 340</td>
<td>Human Resources Management</td>
<td></td>
</tr>
<tr>
<td>MGMT 424</td>
<td>Technology and Innovation Management</td>
<td></td>
</tr>
<tr>
<td>MKTG 311</td>
<td>Marketing Principles and Problems</td>
<td></td>
</tr>
<tr>
<td>MKTG 416</td>
<td>Professional Selling</td>
<td></td>
</tr>
<tr>
<td>MKTG 450</td>
<td>Marketing on the Internet</td>
<td></td>
</tr>
<tr>
<td>PSYC 344</td>
<td>Human Factors</td>
<td></td>
</tr>
<tr>
<td>PRTS 441</td>
<td>Marketing of Hospitality Services</td>
<td></td>
</tr>
<tr>
<td>SMGT 414</td>
<td>Sport Marketing</td>
<td></td>
</tr>
</tbody>
</table>

**Capstone-Project Course (select one of the following):** 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENMA 410</td>
<td>Agile Project Management</td>
<td></td>
</tr>
<tr>
<td>ENTR 368</td>
<td>Entrepreneurship Internship</td>
<td></td>
</tr>
<tr>
<td>ENTR 498</td>
<td>Tutorial Work in Special Topics in Entrepreneurship</td>
<td></td>
</tr>
<tr>
<td>MGMT 426</td>
<td>Entrepreneurship: New Ventures Creation</td>
<td></td>
</tr>
<tr>
<td>MGMT 495</td>
<td>Selected Topics in Management (Practical Entrepreneurship and New Venture Development)</td>
<td></td>
</tr>
<tr>
<td>SEPS 480</td>
<td>Senior Project: Merchandise Retailing</td>
<td></td>
</tr>
</tbody>
</table>

**Total Hours** 12

**Environmental Issues and Management Interdisciplinary Minor**

Sean Banaee, Department of Community and Environmental Health, Coordinator

Continuing environmental degradation is a worldwide problem threatening the quality of life and its viability. The problem can only be understood and addressed by drawing upon the resources of multidisciplinary approaches. The multidisciplinary perspective center of this minor focuses on the human dimensions of the human-environment equation and includes geographical and ecological approaches, scientific and technological methodologies, planning and public policy issues, and ethical, political, economic, and legal considerations.

Course options are as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 350</td>
<td>Environmental Pollution and Control</td>
<td>3</td>
</tr>
<tr>
<td>CEE 458</td>
<td>Sustainable Development</td>
<td>3</td>
</tr>
<tr>
<td>ECON 435</td>
<td>Health Economics: A Global Perspective</td>
<td>3</td>
</tr>
<tr>
<td>ECON 447W</td>
<td>Natural Resource and Environmental Economics</td>
<td>3</td>
</tr>
<tr>
<td>ENVH 402W</td>
<td>Environmental and Occupational Health Administration and Law</td>
<td>3</td>
</tr>
<tr>
<td>ENVH 301</td>
<td>Principles of Environmental Health Science</td>
<td>3</td>
</tr>
<tr>
<td>ENVH 420</td>
<td>Communicable Diseases</td>
<td>3</td>
</tr>
</tbody>
</table>
The Impact of Technology Interdisciplinary Minor

Philip A. Reed, Department of STEM Education and Professional Studies, Coordinator

This interdisciplinary minor develops a broader understanding of technology and its impact on individuals, societies, and the environment. It provides the social context and the historical and philosophical backgrounds needed by informed students to evaluate technology and its impacts. The minor equips students with skills to make better personal decisions about technology and more appropriate choices for their futures.

Course options are as follows:

- CHP 360 Introduction to Global Health
- COMM 340 Media and Popular Culture
- COMM 372T Introduction to New Media Technologies
- COMM 400W Intercultural Communication
- COMM 401 Communication Theory
- COMM 448 Transnational Media Systems
- CS 300T Computers in Society
- CS 312 Internet Concepts
- ECON 402 Transportation Economics
- ECON 454W Economic Development
- ENGL 380 Reporting and News Writing I
- ENGL 382 Reporting News for Television and Digital Media
- ENVH 301 Principles of Environmental Health Science
- ENVH 402W Environmental and Occupational Health Administration and Law
- GEOG 305 World Resources
- GEOG 306T Hazards: Natural and Technological
- HIST 304T History of Medicine, Disease, and Health Technology
- HIST 389T Technology and Civilization
- HIST 386T/SCI 302T The Evolution of Modern Science
- IT 360T Principles of Information Technology
- MUSC 335T Music Technology Survey
- OPMT 303 Operations Management
- PHIL 355E Cybersecurity Ethics
- PHIL 383T Philosophy of Technology & Innovation
- POLS 350T Technology and War
- SOC 352 War and Peace
- STEM 370T Technology and Society

Undergraduate Degree Requirements 10
Sustainability and Conservation Leadership Interdisciplinary Minor

Hans-Peter Plag, Department of Ocean and Earth Sciences, Coordinator (hp plag@odu.edu)

The interdisciplinary minor in Conservation Leadership is offered in collaboration with the U.S. Fish and Wildlife Service (USFWS) as part of a long-term, sustainable program of conservation-related service-learning, internships and leadership programs. The minor will facilitate the development of the next generation of professionals who can address conservation issues and challenges posed by a changing climate and sea level rise. A unique aspect of this interdisciplinary minor is the requirement to take one course that is designated as a service-learning (SL) course in which the student will work at a USFWS (or related) facility.

Course substitutions may be approved by the interdisciplinary minor coordinator.

Course requirements and options are as follows:

IDS/BIOL/OEAS 466W Introduction to Mitigation and Adaptation 3
IDS/BIOL/OEAS 467 Sustainability Leadership 3
IDS 368 Internship in Interdisciplinary Studies 3
Select two (6 credits of which 3 credits must be a Service-Learning (SL) course) 6

BIOL 311 Global Change Biology
BIOL 334 Field Ethnobotany
BIOL 404 Conservation Biology
CHEM 339T The Chemistry of the Environment
CHP 328 Public Health Science
COMM 400W Intercultural Communication
ENVH 301 Principles of Environmental Health Science
GEOG 305 World Resources
GEOG 306T Hazards: Natural and Technological
GEOG 396 Topics in Geography
GEOG 400W Seminar in Geography
GEOG 402 Geographic Information Systems
GEOG 419 Spatial Analysis of Coastal Environments
GEOG 496 Topics in Geography
HLSC 405 Interprofessional Study Abroad on Global Health (SL)
OEAS 310 Global Earth Systems
OEAS 444 Communicating Ocean Science to Informal Audiences
PAS 300 Foundations of Public Service
PAS 301 Ethics, Governance and Accountability in Public Service (SL)
PAS 409 Leadership and Cultural Competence
PAS 411 Multi-Sector Partnerships for Public Service
POLS 335 Environmental Politics
POLS 401 Global Environmental Policy
POLS 455 The Politics of Climate Change
PRTS 405 Outdoor Recreation (SL)
PRTS 406 Outdoor Leadership and Environmental Education
PRTS 433 Camp Administration (SL)
PRTS 495 Topics (Natural Resource Management)
WMST 395 Topics in Women's Studies

TOTAL 15

The Urban Community Interdisciplinary Minor

Christopher B. Colburn, Department of Economics, Coordinator

This interdisciplinary minor encourages an interdisciplinary approach to the problems and crucial issues that emerge from urban environments. Students gain an understanding of the issues associated with the convergence of diverse populations in urban locations and acquire an appreciation of the complexities of the interlocking and contingent nature of urban problems. This will be accomplished through an examination of the topical areas of common space, diversity, urban services, disorder, and work.

Course options are as follows:

ARTH 435W Modern Architecture 3
CHP 415W Critical Issues in Public/Community Health Administration 3
CRJS 325 Women and Crime 3
CRJS 355 Crime and the Community 3
CRJS 441 Drugs and Society 3
ECON 402 Transportation Economics 3
ECON 445W Urban Economics 3
GEOG 310 Geography of the City 3
GEOG 411 Urban and Regional Planning 3
GEOG 412 Cities of the World 3
PSYC 431 Community Psychology 3
PRTS 433 Camp Administration 3
SOC/CRJS 444 Community Justice 3

World Cultures: Values and Visions Interdisciplinary Minor

Lee Slater, Department of World Languages and Cultures, Coordinator

The World Cultures: Values and Vision interdisciplinary minor requires 12 credit hours of 300/400-level courses selected from at least two different disciplines with a maximum of six credits from any one discipline. For completion of the interdisciplinary minor, students must have a minimum overall cumulative grade point average of 2.00 in ALL courses required for the minor exclusive of lower-level courses and prerequisite courses. At least six hours of upper-level courses must be taken through courses offered by Old Dominion University. Three credit hours may be in the major, if a major course is listed as an option for the interdisciplinary minor. As such, it will be credited toward both the major and the interdisciplinary minor.

This interdisciplinary minor develops an understanding of human behavior in different cultures. In order to interpret information from other countries and ethnic groups, students need to learn that certain common notions such as perceptions of personhood, the organization of time and space, and the appropriate organization and behavior of social groups vary from country to country. This minor will explore different cultural perspectives and value systems. Students should emerge with a more sophisticated understanding of their own and others’ cultures.

Course options are as follows:

ANTR 304 Digging Up the Past 3
ANTR 305 North American Archaeology 3
COMM 400W Intercultural Communication 3
ENGL 371W Communication Across Cultures 3
FR 320 Contemporary France through the Media 3
FR 438 Studies in Twentieth-Century French Literature 3
FR 469 A History of French Cinema 3
GEOG 451 Europe 3
GEOG 452 Africa 3
GEOG 453 Asia 3
GEOG 455 The Middle East 3
IT 425 Information Systems for International Business 3
MGMT 361 International Business Operations 3
MKTG 411 Multi-National Marketing 3
POL 325W World Politics 3
PSYC 420 Cross-Cultural Psychology 3
SPAN 322 Identities and Cultures of the Hispanic World 3
SPAN 471 Hispanic Women Authors 3
WCS 307 Understanding European Culture through Film 3
WCS/JAPN 310 Japan: A Cultural Odyssey 3
WCS/FR/GER 410 Berlin-Paris: Crucibles of European Ideas 3
WCS 445/COMM 444/GER 445
WCS/SPAN 471 Hispanic Women Authors 3
WCS/GER 476 German-Jewish Literature and Culture 3

Study Abroad: Any study abroad course at the 300-400 level that offers three credits can fulfill one course requirement for this minor. In cases where a study abroad course fits the themes of another interdisciplinary minor, students may request approval from the minor coordinator to use that study abroad course.

The coordinator for the minor can approve other courses not listed above to fulfill the minor provided they substantively address some aspect of world cultures.

**Option C: International Business and Regional Courses or an approved Certification Program such as Teaching Licensure**

The international business and regional courses option requires ECON 450: International Economics and six hours of approved courses from a selected regional focus described below.

### Asian Focus
Select two of the following: 6
- GEOG 453 Asia
- HIST 336 The Emergence of New China
- HIST 439 Politics and Society in East Asia Since 1945
- POLS 338W Politics of East Asia
- POLS 437 International Relations in East Asia

### European Focus
Select two of the following: 6
- GEOG 451 Europe
- HIST 316 Cold War in History
- POLS 314 European Politics
- POLS 332W Europe in World Affairs
- WCS/FR/GER 410 Berlin-Paris: Crucibles of European Ideas

### Latin American Focus
Select two of the following: 6
- GEOG 454W Latin America
- HIST 373 U.S.-Latin American Relations
- HIST 470 Struggle for Democracy and Development in Latin America
- HIST 371 Modern Mexico
- HIST 372 Central America and the Caribbean Since 1800
- POLS 337 Latin American Politics
- SPAN 322 Identities and Cultures of the Hispanic World

For more information contact Bruce M. Seifert, Department of Finance.

Option C can also be met through an approved certification program such as teaching licensure. The professional education requirements specified for teaching licensure programs meet this option.

**Option D: Upper-Division Course Work from Another College Outside of and not Required by the Major**

Six hours of elective upper-division course work from outside of and not required by the student’s major and college. Transfer courses may be used to meet this requirement but must be from outside of and not required by the student's major and college. Study abroad courses, Military Science and Leadership courses (MSL) and Naval Science courses (NAVS) may be used to meet the Option D requirement for all students, regardless of the student's major and college. Upper-division courses elected to meet the Philosophy and Ethics and Impact of Technology Ways of Knowing areas may also meet the requirement but they must be outside the college and not required by the major.

In the College of Arts & Letters, courses are divided into two components: (1) Arts & Humanities and (2) Social Sciences.

Arts and Letters majors will be permitted to take upper-division courses in their non-major component for this requirement or courses from another college.

By definition the Arts and Humanities component will include: Art, Dance, English, Graphic Design, History, Humanities, Music, Philosophy, Theatre, and World Languages and Cultures. The Social Sciences component will include: African-American Studies, American Studies, Asian Studies, Anthropology, Communication, Criminal Justice, Gaming, Geography, International Studies, Political Science, Sociology, and Women’s Studies.

Students must satisfy all prerequisites before enrolling in any upper-division course.

**Second Major**

The University permits an undergraduate student to pursue a second major. A student pursuing two majors must meet all the degree requirements of one major and at least the departmental requirements of the other. (Most professional degree majors require completion of both the departmental/ school and the college requirements.) Requirements for both majors must be completed prior to receiving the baccalaureate degree. The student will receive one baccalaureate degree. Both majors will appear on the transcript. The degree awarded will be determined by the major to which University and college requirements are applied. Prior to undertaking the second major, the student must have the program approved by the appropriate chief departmental advisor or chair.

Completion of a second major will meet the upper-division General Education Requirements. Students pursuing two majors in the Strome College of Business may not use the second business major to satisfy the upper-division General Education requirement unless one of the majors is economics.

Students wishing to earn a second degree rather than a second major should see the “Second Baccalaureate Degree” section of the catalog.

**Second Baccalaureate Degree**

The University will permit a student to acquire a second baccalaureate degree, provided that he or she:

1. Pursues a different course of study.
2. Meets all University, college, school, and departmental requirements (credits earned for the first degree may be applied, if suitable, toward the second degree).
3. Completes a minimum of 30 semester hours at Old Dominion University that are beyond the requirements for the first degree.

A minimum of 150 credit hours is required for students earning two baccalaureate degrees from Old Dominion University. If the degrees are to be awarded simultaneously, an application for graduation and degree...
Interdisciplinary minors must be reviewed by all colleges and departments. Students whose requests are approved will meet the upper-division assistant vice president for undergraduate studies in the Office of Academic Affairs. Students completing a minor will meet the upper-division writing intensive course in both majors and earn a grade of C (2.0) or better. Students receiving two degrees from Old Dominion University must complete the writing intensive course in both majors and earn a grade of C or better in both courses.

All second degree students must meet the college/departmental requirements for both degrees even if some of these requirements are also general education courses.

Students who received their first degree from Old Dominion University should be aware that grades in all undergraduate courses (for both the first and the second degree) will be included in the cumulative grade point average.

Students wishing to earn a second major rather than a second degree should see the “Second Major” section of the catalog for information.

Minors

In addition to the completion of courses in the area of the major field, a candidate for a baccalaureate degree may complete a minor. The completion of a minor is optional. The minor may be chosen to support the major, to offer greater job opportunities to the student on graduation, or to provide recognition of study in a second academic area. Completion of a University-approved minor will meet the upper-division General Education Requirements. Students who complete the course requirements for the minor, but who do not attain a 2.00 grade point average in the minor, may request that the course work be approved to meet the upper-division general education requirement. The request may be initiated through the student’s advisor and the associate dean of their college and submitted to the assistant vice president for undergraduate studies in the Office of Academic Affairs. Students whose requests are approved will meet the upper-division requirement, but they will not receive credit for the minor.

For completion of a minor, an undergraduate student must have the following:

1. A minimum of 12 credit hours in a specified minor, normally at the 300 and 400 upper-level.
2. An overall grade point average of 2.0 or above in all courses specified as a requirement in the minor exclusive of prerequisite courses. All 300-, 400-, and approved 200-level courses designated for the minor and taken by the student will be calculated in the student's grade point average for the minor. For example, if the minor requires four courses at the 300- and 400-level and the student completes five courses, all five courses will be included in the calculation of the grade point average for the minor.
3. Six credit hours in the minor from Old Dominion University. No course that is introductory or foundational, or that meets a lower level General Education requirement, may be included, although such courses may be prerequisites for courses in the minor.

Minors may be proposed by departments and programs and must be approved by the appropriate college committee and dean, by Faculty Senate Committee A and by the provost and vice president for academic affairs. Interdisciplinary minors must be reviewed by all colleges and departments involved prior to submission to Committee A of the Faculty Senate. Three credit hours in the interdisciplinary minor may be in the major, if a major course is listed as an option for the interdisciplinary minor. As such, it will be credited toward both the major and the interdisciplinary minor. Interdisciplinary minors require 12 credit hours of 300/400-level courses selected from at least two different disciplines with a maximum of six credits from any one discipline.

Specific minor requirements may be found in the section on Colleges, Schools and Departments of Instruction in this catalog.

Procedures

Students who wish to pursue a minor must declare the minor with and be advised by the department offering the minor, their Student Success Advisor (for online students), or the distance learning representative. Students completing a minor should present the minor for certification when submitting applications for graduation.

Following are approved academic minors:

**Arts and Letters**

- African-American Studies ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/africanamericanstudies/#minorinafricanamericanstudies))
- American Studies ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/#minorinamericanstudies))
- Arabic ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/worldlanguagesandcultures/#arabicminor))
- Art History ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/art/#minorinarthistory))
- Asian Studies ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/asiانstudies/#minorinafricanamericanstudies))
- Chinese Studies ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/worldlanguagesandcultures/#chinesestudiesminor))
- Communication ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/communicationandtheatrerarts/#minorincommunication))
- Criminal Justice ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/sociologyandcriminaljustice/#minorinsociologyandcriminaljustice))
- Dance ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/communicationandtheatrerarts/#minorindance))
- English ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/communicationandtheatrerarts/#minorinenglish))
- European Studies ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/worldlanguagesandcultures/#europeanstudiesminor))
- Film and Video Studies ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/miscellaneous/#minorinfilmandvideo))
- Geography ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/politicalscienceandgeography/#minorinpolitics))
- Geography—Environment and Resources Specialization ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/politicalscienceandgeography/#minoringeo))
- History ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/history/#minorinhistory))
- Holocaust and Genocide Studies ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/miscellaneous/#minorinholocaustandgenocide))
- International Studies ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/internationalstudies/#minorininternationalstudies))
- Japanese ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/worldlanguagesandcultures/#japaneseminor))
- Jewish Studies ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/miscellaneous/#minorinjewishstudies))
- Latin American Studies ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/worldlanguagesandcultures/#latina minor))
- Middle Eastern Studies ([link](http://catalog.odu.edu/undergraduate/collegeofartsletters/worldlanguagesandcultures/#middleeasternstudies))
• Music Composition (http://catalog.odu.edu/undergraduate/collegeofartsletters/music/#minorinmusicmusic)
• Music History (http://catalog.odu.edu/undergraduate/collegeofartsletters/music/#minorinmusic)
• Music Performance (http://catalog.odu.edu/undergraduate/collegeofartsletters/music/#minorinmusic)
• Philosophy (http://catalog.odu.edu/undergraduate/collegeofartsletters/philosophyandreligiousstudies/ #minorinphilosophyandreligiousstudies)
• Philosophy—Applied Ethics Specialization (http://catalog.odu.edu/undergraduate/collegeofartsletters/philosophyandreligiousstudies/ #minorinphilosophyandreligiousstudies)
• Philosophy—Religious Studies Specialization (http://catalog.odu.edu/undergraduate/collegeofartsletters/philosophyandreligiousstudies/ #minorinphilosophyandreligiousstudies)
• Philosophy—Political and Legal Studies Specialization (http://catalog.odu.edu/undergraduate/collegeofartsletters/philosophyandreligiousstudies/ #minorinphilosophyandreligiousstudies)
• Political Science (http://catalog.odu.edu/undergraduate/collegeofartsletters/politicalscienceandgeography/ #minorinpoliticalscience)
• Political Science—Public Law Specialization (http://catalog.odu.edu/undergraduate/collegeofartsletters/politicalscienceandgeography/ #minorinpoliticalscience)
• Sociology (http://catalog.odu.edu/undergraduate/collegeofartsletters/sociologyandcriminaljustice/ #minorinsociologyandcriminaljustice)
• Sociology—Social Welfare Specialization (http://catalog.odu.edu/undergraduate/collegeofartsletters/sociologyandcriminaljustice/ #minorinsociologyandcriminaljustice)
• Studio Arts (http://catalog.odu.edu/undergraduate/collegeofartsletters/art/ #minorinstudioarts)
• Studio Art Photography (http://catalog.odu.edu/undergraduate/collegeofartsletters/art/artminorinstudioartphotograph) #minorinstudioartphotograph)
• Theatre (http://catalog.odu.edu/undergraduate/collegeofartsletters/communicationandtheatrearts/ #minorintheatre)
• Women’s Studies (http://catalog.odu.edu/undergraduate/collegeofartsletters/womensstudies/ #minorinwomensstudies)
• World Languages and Cultures (http://catalog.odu.edu/undergraduate/collegeofartsletters/worldlanguagesandcultures/ #minorinlanguageandculture)
  • French (http://catalog.odu.edu/undergraduate/collegeofartsletters/worldlanguagesandcultures/#minorinfrancophone)
  • German (http://catalog.odu.edu/undergraduate/collegeofartsletters/worldlanguagesandcultures/#minoringerman)
  • Spanish (http://catalog.odu.edu/undergraduate/collegeofartsletters/worldlanguagesandcultures/#minorinspace)

Business
• Accounting (http://catalog.odu.edu/undergraduate/stromecollegeofbusiness/bsbaccounting/#accountingminor)
• Business Administration (http://catalog.odu.edu/undergraduate/stromecollegeofbusiness/bsbusadmin/#minorinbusinessadministration)
• Business Analytics (http://catalog.odu.edu/undergraduate/stromecollegeofbusiness/bsbdataanalytics/#businessanalyticsminor)
• Economics (http://catalog.odu.edu/undergraduate/stromecollegeofbusiness/bsbeyond/ #minorineconomics)
• Financial Management (http://catalog.odu.edu/undergraduate/stromecollegeofbusiness/bsbfin/ #financialmanagementminor)
• Financial Management - Real Estate (http://catalog.odu.edu/undergraduate/stromecollegeofbusiness/bsbfin/ #real estateminor)
• Financial Management - Risk Management and Insurance (http://catalog.odu.edu/undergraduate/stromecollegeofbusiness/bsbfin/ #riskmanagementminor)
• Information Systems and Technology (http://catalog.odu.edu/undergraduate/stromecollegeofbusiness/bsbinformatics/#informationstechnologyminor)
• International Business (http://catalog.odu.edu/undergraduate/stromecollegeofbusiness/bsbint/ #internationalbusinessminor)
• Management (http://catalog.odu.edu/undergraduate/stromecollegeofbusiness/bsbmanagement/#managementminor)
• Marketing (http://catalog.odu.edu/undergraduate/stromecollegeofbusiness/bsbmarketing/#marketingminor)
• Maritime and Supply Chain Management (http://catalog.odu.edu/undergraduate/stromecollegeofbusiness/bsbmaritimebusiness/#maritimebusinessminor)
• Military Leadership (http://catalog.odu.edu/undergraduate/stromecollegeofbusiness/militaryleadership/#minorinnmilitaryleadership)
• Public Service (http://catalog.odu.edu/undergraduate/stromecollegeofbusiness/bsbusadmin/#minorinpublicservice)

Education
• Addiction Prevention and Treatment (http://catalog.odu.edu/undergraduate/dardencollegeofeducation/counselinghumanservices/ #minoraddictiontreatmentandprevention)
• Coaching Education (http://catalog.odu.edu/undergraduate/dardencollegeofeducation/humanmovementstudies/#minorcoaching)
• Exercise Science (http://catalog.odu.edu/undergraduate/dardencollegeofeducation/humanmovementstudies/#minor exercisen)
• Fashion Merchandising (http://catalog.odu.edu/undergraduate/dardencollegeofeducation/stemeducationprofessionalstudies/ #minorinfashionmerchandising)
• Health Education (http://catalog.odu.edu/undergraduate/dardencollegeofeducation/humanmovementstudies/#minorinhealth)
• Human Services (http://catalog.odu.edu/undergraduate/dardencollegeofeducation/humanmovementstudies/#minorinhuman services)
• Marketing Education (http://catalog.odu.edu/undergraduate/dardencollegeofeducation/stemeducationprofessionalstudies/b s-careerandtechnicaleducation/#marketing)
• Park, Recreation and Tourism Management (http://catalog.odu.edu/undergraduate/dardencollegeofeducation/humanmovementstudies/ #minorinrecreation)
• Secondary Education (professional education requirements) (http://catalog.odu.edu/undergraduate/dardencollegeofeducation/ teachingearning/#teachereducation#secondaryundergraduate)
• Special Education (http://catalog.odu.edu/undergraduate/dardencollegeofeducation/stemeducationprofessionalstudies/ #minorinspecialed)
• Speech-Language Pathology and Audiology (http://catalog.odu.edu/undergraduate/dardencollegeofeducation/stemeducationprofessionalstudies/#speakpath)
• Sport Management (http://catalog.odu.edu/undergraduate/dardencollegeofeducation/humanmovementstudies/#minorin sport)
• Therapeutic Recreation (http://catalog.odu.edu/undergraduate/dardencollegeofeducation/humanmovementstudies/#minorin therapeutics)
• Training and Development (http://catalog.odu.edu/undergraduate/dardencollegeofeducation/stemeducationprofessionalstudies/ #minorintraininganddevelopment)

Engineering and Technology
• Aerospace Engineering (http://catalog.odu.edu/undergraduate/frankbattencollegeofengineeringandtechnology/mechanica aerospaceengineering/#minorinaerospaceengineering)
• Civil Engineering (http://catalog.odu.edu/undergraduate/frankbattencollegeofengineeringandtechnology/civilenvironmental engineering/#minorincivilengineering)
• Civil Engineering Technology—Construction
  (http://catalog.odu.edu/undergraduate/
   frankbattencollegeofengineeringandtechnology/engineeringtechnology/
    minorincivilengineeringtechnologyconstructiontext)
• Computer Engineering
  (http://catalog.odu.edu/undergraduate/
   frankbattencollegeofengineeringandtechnology/
    electricalcomputerengineering/#minorincomputerengineeringtext)
• Electrical Engineering
  (http://catalog.odu.edu/undergraduate/
   frankbattencollegeofengineeringandtechnology/
    electricalcomputerengineering/#minorinelectricalengineeringtext)
• Electrical Engineering Technology
  (http://catalog.odu.edu/undergraduate/
   frankbattencollegeofengineeringandtechnology/
    engineeringtechnology/#minorinelectricalengineeringtext)
• Engineering Management
  (http://catalog.odu.edu/undergraduate/
   frankbattencollegeofengineeringandtechnology/
    engineeringmanagementsystemsengineering/#engineeringmgmtminor)
• Environmental Engineering
  (http://catalog.odu.edu/undergraduate/
   frankbattencollegeofengineeringandtechnology/
    civilenvironmentalengineering/#minorinevironmentalengineeringtext)
• Global Engineering
  (http://catalog.odu.edu/undergraduate/
   frankbattencollegeofengineeringandtechnology/
    minoringlobalengineeringtext)
• Marine Engineering
  (http://catalog.odu.edu/undergraduate/
   frankbattencollegeofengineeringandtechnology/engineeringtechnology/
    minorinmarineengineeringtext)
• Mechanical Engineering—Mechanics
  (http://catalog.odu.edu/undergraduate/
   frankbattencollegeofengineeringandtechnology/
    mechanicalaerospaceengineering/#minorimechanicalengineeringtext)
• Mechanical Engineering—Thermal Sciences
  (http://catalog.odu.edu/undergraduate/
   frankbattencollegeofengineeringandtechnology/
    mechanicalaerospaceengineering/#minorimechanicalengineeringtext)
• Mechanical Engineering Technology
  (http://catalog.odu.edu/undergraduate/
   frankbattencollegeofengineeringandtechnology/
    engineeringtechnology/#minorimechanicalengineeringtext)
• Military Leadership
  (http://catalog.odu.edu/undergraduate/
   frankbattencollegeofengineeringandtechnology/
    navalsciencenavalreserveofficerstrainingcorps/
     minorinmilitaryleadershiptext)
• Modeling and Simulation
  (http://catalog.odu.edu/undergraduate/
   frankbattencollegeofengineeringandtechnology/
    computationalmodelingandsimulationengineering/#minorinsim)
• Motorsports Engineering
  (http://catalog.odu.edu/undergraduate/
   frankbattencollegeofengineeringandtechnology/
    mechanicalaerospaceengineering/#minorinmotorsportsengineeringtext)

Health Sciences
• Community Health
  (http://catalog.odu.edu/undergraduate/
   collegeofhealthsciences/communityenvironmentalhealth/
    minorincommunityhealth)
• Environmental Health
  (http://catalog.odu.edu/undergraduate/
   collegeofhealthsciences/communityenvironmentalhealth/
    minorinenvironmentalhealth)
• Medical Laboratory Science
  (http://catalog.odu.edu/undergraduate/
   collegeofhealthsciences/medicaldiagnostictranslationalsciences/
    minorinmedlab)
• Occupational Safety
  (http://catalog.odu.edu/undergraduate/
   collegeofhealthsciences/communityenvironmentalhealth/
    minorinoccupationalhealth)

Sciences
• Biology
  (http://catalog.odu.edu/undergraduate/courses/biologicalsciences/#minorinbiology)
• Chemistry
  (http://catalog.odu.edu/undergraduate/courses/chemistrybiochemistry/#minorinchemistry)
• Computer Science
  (http://catalog.odu.edu/undergraduate/
   collegeofsciences/computerscience/#minorincomputer)